

**The Canadian Ecology Centre
Forestry Research Partnership**

Canadian Forest Service

Ontario Ministry of Natural Resources

Tembec

**Strategic Plan (Version 13)
2006-2010**

*Demonstrating our commitment to the forests of tomorrow through applied research
and sustainable development...*

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1. Executive Summary

In 2000-2005 the Forest Research Partnership (FRP) established itself as a fully functional cost effective, flexible and respected private/public partnership that attracted a wide array of collaborators including academia across Canada. The FRP exceeded its financial leverage and R&D objectives and was responsible for the implementation and approval of spatial modeling as well as growth and yield improvements in Ontario. This initial 5-year program has resulted in a range of 34 project outputs and/or tools are presently in place to support optimization in forest management planning, an additional 15 are in process including work on Heron/Osprey, Pine Marten, Caribou, and Multi-cohort all targeted at providing strong science to help direct sound forest management policy.

FRP strategic direction through the next five years (2006 to 2010) is to continue with current investments to realize their gains, introduce additional work in agreed-to and focused areas, provide focus and technical guidance on enhanced Forest Resource Inventories, and through aggressive extension implement the 2000-2005 results into Forest Management Plans. The FRP will accomplish these goals within the financial and fibre (10/10) targets originally established in 2000, and will seek means to strategically strengthen the partnerships ability to leverage additional resources. The FRP will continue to strive to be an effective Science Partnership that promotes good science and enlightened forest policy, not only for Tembec and Ontario, but also for other companies and jurisdictions across Canada.

This document, guided by the vision, mission, and higher-level goals of the partnership, provides the comprehensive strategic direction required to form annual operations plans through the next five-year period and identifies the measurable targets against which those plans will be gauged.

2. Approvals

This strategic plan is respectfully submitted for your consideration and approval

Bill Snell
Technical Manager - Research and Development
Tembec Industries Inc.

We have reviewed the Strategic Plan of the Canadian Ecology Centre – Forestry Research Partnership and agree with and approve of its content and direction

Pardeep Ahluwalia
Director General
Great Lakes Forestry Centre

Fraser Dunn
Director
Applied Research and Development Branch
Ontario Ministry of Natural Resources

Mike Martel
Vice President
Forest Resource Management Group
Tembec Inc.

3. Introduction/Context

The Forestry Research Partnership (FRP) was created in 2000 by Tembec, the Ontario Ministry of Natural Resources, and the Canadian Forest Service in response to the 1999 Ontario Forest Accord. The pertinent clauses of the Accord identified the need for science partnerships and the implementation of intensive forest management practices on the forest landscape. In its short five year history, the FRP has organized and managed over 140 forest science projects, all supporting in one form or another the mission of the FRP - to identify, develop and implement ecologically sustainable and scientifically defensible leading edge forestry practices required to maintain and enhance an economically viable supply of quality fibre to Tembec mills, and to the communities those mills support, over the long term.

The FRP grew into a strong positive force in the Ontario forest science arena during its first five-year term. It developed a solid reputation for getting things done, for being cost effective, and for working openly, honestly and pro-actively with a large array of collaborators, including academia across Canada. Its flexible private/public partnership structure, coupled with ready access to the significant scientific, intellectual and financial resources of its primary partners, provided all the elements required to deliver a focused, innovative and dynamic science program. The Canadian Ecology Centre (CEC) has provided a superb venue and platform for the FRP and its extension activities. The CEC is a registered non-profit charitable organization that provides natural resources and environmental and outdoor education to students of all ages, teachers, and natural resources sector workers and professionals.

The winning formula of the Forestry Research Partnership will continue into its second five-year mandate, however new and innovative approaches and ideas will be added to the mix in order advance, apply and integrate FRP science into policy and practice, specifically in the implementation of enhanced forest productivity (a.k.a. intensive silviculture) on portions of Tembec's operational landbase in central and north-eastern Ontario and eventually north-western Quebec.

3.1 Vision, Mission Statement & High Level Goals

The vision and mission of the FRP, originally developed in 2000, will remain the same during the next five years (2006-2010). However greater focus, emphasis and effort will be placed upon applying the outputs and results of FRP science in the implementation of enhanced forest productivity on suitable areas of the productive forest landbase through active involvement and integration with forest management planning and operations on several sustainable forest licenses in central and north-eastern Ontario (i.e. Nipissing Forest and the Romeo Malette Forest). These statements will continue to serve the Partnership well as it currently exists, or as it is expanded or evolved to be a part of a more comprehensive and large-scale program, ultimately allowing the FRP to continue to

be a solid regional expression of forestry research and development within Ontario and Canada.

Existing Vision:

Demonstrating our commitment to the forests of tomorrow through applied research and sustainable development.

Existing Mission Statement:

The Mission of the Forestry Research Partnership is to identify, develop and implement ecologically sustainable and scientifically defensible leading edge forestry practices required to maintain and enhance and economically viable supply of quality fibre to Tembec mills, and to the communities those mills support, over the long term.

High Level Goals:

Goal#1:Application of Enhanced Forest Productivity

- Apply Patchworks model in each Management Unit (in conjunction with the FMP Schedule);
- Integrate research recommendations into operational enhanced forest productivity strategies in forest management plans.
- Implement enhanced forest productivity practices on the ground and monitor results.
- Link Goal #1 directly with Goal #3 Extension to support aggressive implementation.

Goal#2:10/10 Sustainability Science

- Continue and refine the science work done to date to identify strategies that will result in a 10% increase in allowable cut in 10 years, within an ecologically and economically sustainable context;

Goal#3:Extension & Application (Goal #1)

- Continue the emphasis on networking, communication, and interaction between the partners, between researchers and practitioners, and between scientists and policy makers. *Emphasis will be on transfer of knowledge gained from the past five years to forest management planning and operations for Tembec*
- Knowledge Transfer, Training, and Support to Practitioners (Planning & Operations) to enable implementation of new science using appropriate tools.
- Broad dissemination of projects and results to partners, collaborators, and public as primary and transparent transfer vehicle.

Goal#4: Policy Development & Implementation

- Increase the effort directed to synthesizing the science outputs generated by the FRP and informing policy development and implementation provincially, both within government and within industry;

Goal#5: Enhance the sustainability of the Forestry Research Partnership

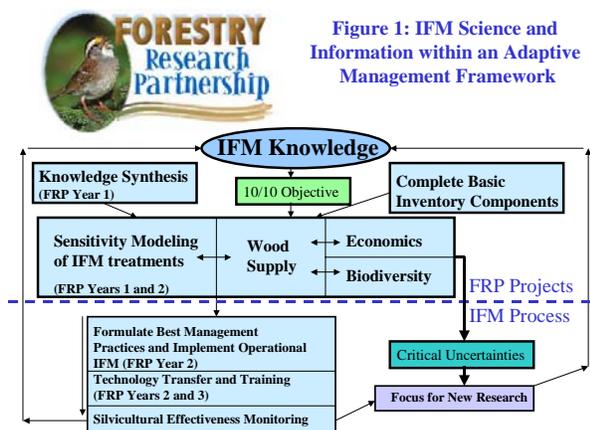
- Strategically increase partnerships while ensuring fully functional FRP governance;
- Maintain an open and transparent approach to managing the FRP, and seek to attract more collaboration at both the project and program levels;
- Develop stronger linkages to other research providers, primarily in Ontario and Quebec to increase the influence and effectiveness of the FRP;
- Maintain an entrepreneurial spirit in the FRP to enable flexibility and promote nimble responses to attractive and pertinent opportunities when they occur.

The success and value of the Forestry Research Partnership will be measured by the degree to which it demonstrates:

1. Increased certainty around current and future wood supply;
2. The application of new and improved science and information in the implementation of enhanced forest productivity practices on the ground.
3. Shareholder and taxpayer value;
4. An effective science partnership that focuses forest science expertise on critical management issues not only in Ontario, but across the country, and;
5. The influence of new science and information in informing policy and guideline review and development.

3.2 Strategic Direction & Operating Objectives:

Respecting both the established and successful history of the FRP, the concepts of adaptive management (**Figure 1: Adaptive Management Framework**), and the desire and requirement for innovation and new directions that are relevant to the evolving forestry and natural resources sector the FRP will continue to focus on core targets including its primary



target of identifying technology and techniques to allow Tembec to increase the annual allowable cut (AAC) on its licence areas by 10% within 10 years (e.g. **Figure 2**, Romeo Malette Forest Wood Supply). The 10/10 targets are to be achieved in the context of ecological sustainability, reduced operational costs, improved fibre utilization and enhanced future fibre quality. It is important to recognize that the measurable targets identified on the following table (**Table 1**, 10-10 Baseline Table) will be achieved through implementation of the science into the respective forest management plans.

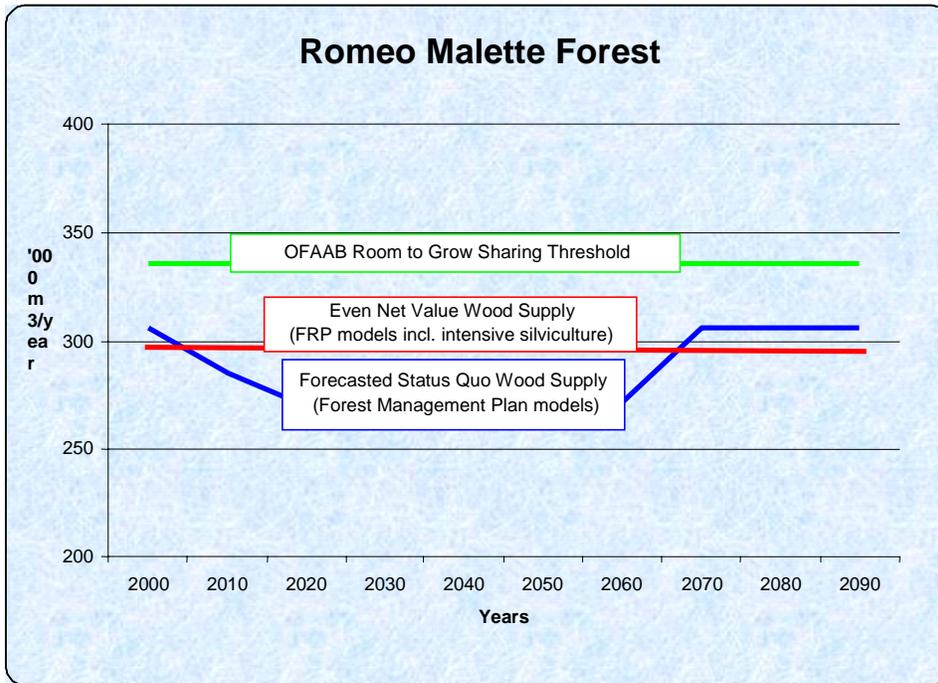


Figure 2: Romeo Malette Forest Wood Supply.

The 'High Level Goals, Strategic Direction, & Operational Objectives' chart (**Table 2**) identifies strategic direction and measurable targets in reference to each of the FRP High level goals, and is intended to provide direction for the FRP during the 2006 to 2010 period. This table also provides linkage to the current operating plan and ongoing projects to assist in a comprehensive understanding of the program objectives during this time frame.

Table 2: High Level Goals, Strategic Objectives, & Operating Objectives

High Level Goal: Strategic Direction: Operating Objectives:

High Level Goal:	Strategic Direction:	Operating Objectives:
<p>Goal 1: Application of Enhanced Forest Productivity</p>	<ul style="list-style-type: none"> • Apply Patchworks model in each Management Unit (in conjunction with the FMP Schedule); • Integrate research recommendations into operational enhanced forest productivity strategies in forest management plans. • Implement enhanced forest productivity practices on the ground and monitor results. • Link directly with Goal #3 Extension to support aggressive implementation. 	<p>Ensure Patchworks is included in each forest management plan ‘Terms of Reference’ and implemented for each of the following MU’s: RMF, GCF, MR, SRF, SMF</p> <p>Following strategic review at the MU level, implement pertinent FRP Science results for each FMP including the following: Yield Curves, Spatial Modeling, Genetically Improved Stock, Osprey/Heron, Pine Marten, Caribou</p> <p>Ensure the application of EFP practices as directed at the management unit level.</p> <p>Provide necessary levels of support from FRP staff and project experts to implement science in Forest Management Plans.</p>
<p>Goal 2: 10/10 Sustainability Science</p>	<p>Continue and refine the science work done to date to identify strategies that will result in a 10% increase in allowable cut in 10 years, within an ecologically and economically sustainable context including;</p> <ul style="list-style-type: none"> • FRI Science 	<p>Conduct analysis of individual forests using Patchworks to identify science priorities and potential science benefits at a forest level to provide science direction.</p> <p>Continue support of advancing technology for inventory including</p>

	<ul style="list-style-type: none"> • Growth & Yield • Tree Improvement • Sustainability and diversity measurement tools • Wood Supply Modeling Tools • Employ the strategic and science plans in evaluating new science projects considered by the FRP. 	<p>LiDAR science and tools, automation, individual tree classification, operational level inventory information (diameter distribution by species by stand).</p> <p>Develop & apply succession and stand level modeling tools.</p> <p>Continued evolution of G&Y science</p> <p>Collection of data to support development of above products through re-measurement and strategic establishment of PGP's</p> <p>100% Planted Stock 1st generation genetically improved.</p> <p>Support Realized Gain Trials accurately define associated gain. Support collection of first generation seed on strata basis.</p> <p>Habitat Science (science based protection of values).</p> <p>Continue development, refinement, and implementation of spatial & socio-economic models</p> <p>Science advisory committee evaluates projects on an annual basis using the science strategy.</p>
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<p>Goal 3: Extension and Knowledge Transfer</p>	<ul style="list-style-type: none"> • Continue the emphasis on networking, communication and interaction between the partners, between researchers and practitioners, and between scientists and policy makers. <i>Emphasis will be on transfer of knowledge gained from the past five years to forest management planning and operations for Tembec.</i> • Knowledge Transfer, Training, and Support to Practitioners (Planning & Operations) to enable implementation of new science using appropriate tools. • Broad dissemination of projects and results to partners, collaborators, and public as primary and transparent transfer vehicle. 	<p>Policy Discussions FRP Governance Support</p> <p>Strategically and aggressively provide extension and knowledge transfer through the use of the following tools and methodologies;</p> <p>Core Teams, Hands-On ‘One on One’ Science Transfer, Training & Professional Development, Provide resources to support implementation to planning teams and practitioners</p> <p>Publications Workshops Website</p>
<p>Goal 4: Policy Development & Implementation</p>	<p>Increase the effort directed to synthesizing the science outputs generated by the FRP and to informing policy development and implementation provincially, both within government and within industry:</p>	

Deleted: ¶

	<ul style="list-style-type: none"> • Engage partnership to inform science based policy change relating to 10/10. • Facilitating communications forums where science results are communicated policy makers. • Provide input to contribute to the value case for new science. 	<p>Growth & yield, guidelines, modeling.</p> <p>FRI Guidelines (Marten, Caribou, Osprey)</p> <p>Remote Sensing (LiDAR, imagery, etc...)</p>
<p>Goal 5: Enhance the sustainability of the Forestry Research Partnership.</p>	<ul style="list-style-type: none"> • Strategically increase partnerships while ensuring fully functional FRP governance; • Maintain an open and transparent approach to managing the FRP, and seek to attract more collaboration at both the project and program levels; • Develop stronger linkages to other research providers, • Maintain an entrepreneurial spirit in the FRP to • Maintain or enhance the value proposition 	<p>Other forest industry, Fibre Centre, etc....</p> <p>OCE, LAMF, EFPF, Forest Ecosystem Science Coop., Academics, etc...</p> <p>Primarily in Ontario and Quebec to increase the influence and effectiveness of the FRP;</p> <p>Enable flexibility and promote nimble responses to attractive and pertinent opportunities when they occur.</p> <p>2:1 Leverage Tax Credits.</p>

4. The Partnership

The primary partners of the Forestry Research Partnership are Tembec Inc., the Ontario Ministry of Natural Resources, and the Canadian Forestry Service. These three organizations will continue to bring their individual strengths and abilities together to develop, orchestrate and deliver the Forestry Research Partnership program as a whole.

The lead role for the various components and projects of the Forestry Research Partnership will move from partner to partner to reflect individual capabilities and resources. Other individual partnerships for specific themes or projects will continue to be developed, as required, to deliver specific objectives where benefit to the Forestry Research Partnership and to the individual partner can be demonstrated.

Tembec Inc.

Tembec will continue to make the following lead contributions to the Forestry Research Partnership:

- An annual budget of \$0.85 million, focused primarily in Ontario.
- A manager to coordinate Forestry Research Partnership activities.
- Access to licensed and privately owned landbases on which to implement forestry R&D projects.
- Full participation in and contribution to other R&D initiatives and partnerships across Ontario and Canada.
- Applied senior management influence on the forest industry in support of forestry R&D in those provincial jurisdictions in which the Company operates.

Ontario Ministry of Natural Resources (MNR)

MNR will continue to make the following lead contributions to the Forestry Research Partnership:

- Science support, research and transfer at all levels, cooperatively with all partners.
- Policy and program support.
- Access to provincial program funding (eg: EFPS).

Canadian Forest Service (CFS)

The CFS will continue to make the following lead contributions to the Forestry Research Partnership:

- Science support, research and transfer at all levels, cooperatively with all partners.
- National perspectives and continuity between provinces.
- Access to federal program funding.

- Direct and comprehensive collaboration with the Petawawa Research Forest and its research legacy through individual science projects, extension and knowledge transfer.

Other collaborators

The Forestry Research Partnership will maintain and continue to form successful strategic alliances with collaborators on a project specific basis where their expertise or networks contribute to a superior overall research product. No discrete boundaries separate the mandates or the roles of one partner from another. On the contrary, each to some extent overlaps with the other. The objective of collaboration is to orchestrate maximum benefit from the areas of overlap, and to maintain a seamless transition to the areas of difference. Current collaborators expected to continue to participate in a number of projects are listed below.

Sustainable Forest Management Network (SFMN)
 Forest Engineering Research Institute of Canada (FERIC) & FORINTEK
 Forest Ecosystem Science Cooperative
 Lake Abitibi Model Forest
 Ontario Centres of Excellence (OCE)

Other Forest Industry

The Forestry Research Partnership will continue to seek to catalyze and complement a growing interest within the forest industry to improve integration of research activities across the province. The objective is to better focus scarce resource on common issues, and to promote collaboration and interaction where it makes sense to do so.

The FRP has successfully collaborated with a number of industry partners, and several sustainable forest licenses on a number of individual projects and this arrangement will continue as opportunities arise. Companies who have taken part in specific FRP projects include:

Grant Forest Products	Algonquin Forest Authority
Domtar	Ottawa Valley Forestry
Nipissing Forest Resource Management	Hearst Forest Management
Westwind Forest Stewardship	

Academia

Through specific projects the Forestry Research Partnership has developed an extensive relationship with various academic institutions in Ontario and across Canada including:

University of Guelph	Lakehead University
Trent University	University of Toronto
University of Waterloo	Queens University

Carleton University
Nipissing University
University of Alberta

University of Quebec (UQAT and
UQAM)
University of New Brunswick

These strong academic liaisons are providing tremendous value to the FRP through leadership of individual projects; these relationships will continue to be maintained and cultivated.

5. Governance and Leadership (2006-2010)

The FRP will continue to be governed by three main committees: the Executive, the Management and the Science Advisory committees. All key partners will continue to have representation on these committees (Figure 3). Responsibility for Forestry Research Partnership Program delivery will rest with the General Manager of the FRP, presently Tembec's Technical Manager, Forest Resource Management Group.

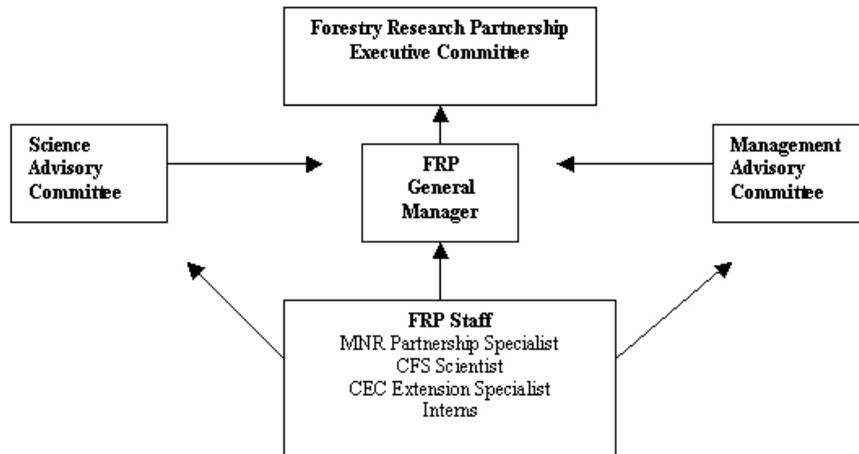


Figure 3. *Forest Research Partnership Governance and Leadership Structure.*

Roles and Responsibilities

The primary roles of the Science Advisory Committee are to ensure excellence in science products and services and in the relevance and utility of project outputs; to ensure application of science knowledge and products emerging from FRP projects by actively supporting extension efforts for the partnership; and to review projects for recommendation to the management advisory committee.

The principle roles of the Management Advisory Committee are to recommend strategic direction for the Forestry Research Partnership to the Executive Committee; to build and maintain the enabling framework and principles for effective project development; and to deliver and coordinate inter-organizational collaboration.

The principle responsibilities of the Executive Committee are to provide strategic direction to the Forestry Research Partnership by setting high level goals; to provide leadership in the development and pursuit of resource opportunities (capacity and capability, money, equipment, facilities, etc...); to support the partnership in delivery of science needs that address partner objectives; and to aggressively pursue policy and practical acceptance of innovation and science emerging from the FRP.

6. Accountability and Delivery

The FRP program will continue to be delivered through a series of projects, each of which contributes directly or indirectly to enhancing and advancing sustainable forest management; all of which collectively interact to achieve the desired outcomes of the partnership and its members. This model was efficient and effective during the FRP's first five year period. Within the Forestry Research Partnership context, each project will continue to be designed as a stand-alone initiative, tailored to its specific funding source, and with its own project plan, leader and schedule; again a positive relic of the Partnership's formative years. The FRP will continue to enlist the direct support of a project administrator (MNR Science Partnership Specialist) to coordinate and manage the reporting and accountability of all projects.

In addition to well established and regularly distributed Extension products, and mandatory reporting to affiliated funding agencies, FRP staff will produce a quarterly report for all members of governing committees highlighting activities and milestones achieved; these reports will be further rolled up into an annual report complete with active project listings and a budgetary summary.

7. Conclusion

The Forestry Research Partnership remains highly relevant to its individual members and an effective force for advancing and applying forest science as it enters into its second five-year period. The Partnership will continue to capitalize on past success and a tried and true '*modus operandi*' through an array of individual research projects, while simultaneously pursuing new and innovative approaches that directly apply the resulting

forest science in the acceptance and implementation of enhanced forest productivity in central and north-eastern Ontario. In addition, the FRP will explore opportunities with respect to emerging developments in the forestry and natural resources sector including state of the art forest inventory science and technology.

Continued effective collaboration, creativity and innovation in program delivery will ensure that these goals are achieved during the FRP's second five-year term.

Appendix A
FRP Science Plan

Introduction

The intent of this Science Plan is to implement science activities that will deliver on the strategic direction and goals of the FRP for the next 5 years. The FRP 5-Year Report (2000-2005) specified 5 goals and 5 measures of success for the FRP. These goals and measures were approved by the Executive Committee and are reiterated in the FRP Annual Plan also approved by the Executive Committee.

Goal#1: Application of Enhanced Forest Productivity

- Validate Patchworks model outputs through on-the-ground verification;
- Integrate research recommendations into operational EFP strategies in Forest Management Plans;

Goal#2: 10/10 Sustainability Science

- Continue and refine the science work done to date to identify strategies that will result in a 10% increase in allowable cut in 10 years, within an ecologically and economically sustainable context;

Goal#3: Extension

- Continue the emphasis on networking, communication, and interaction between the partners, between researchers and practitioners, and between scientists and policy makers;

Goal#4: Policy Development & Implementation

- Increase the effort directed to synthesizing the science outputs generated by the FRP and informing policy development and implementation provincially, both within government and within industry;

Goal#5: Enhance the sustainability of the Forestry Research Partnership.

- Maintain an open and transparent approach to managing the FRP, and seek to attract more collaboration at both the project and program levels from a larger number of more diverse partners;
- Develop stronger linkages to other research providers, primarily in Ontario and Quebec to increase the influence and effectiveness of the FRP;
- Maintain an entrepreneurial spirit in the FRP to enable flexibility and promote nimble responses to attractive and pertinent opportunities when they occur.

The success and value of the Forestry Research Partnership will be measured by the degree to which it demonstrates:

6. Increased certainty around current and future wood supply;
7. The application of new and improved science and information in the implementation of enhanced forest productivity practices on the ground.

8. Shareholder and taxpayer value;
9. An effective science partnership that focuses forest science expertise on critical management issues not only in Ontario, but across the country, and;
10. The influence of new science and information in informing policy and guideline review and development.

The Science Advisory Committee has reviewed these goals and measures, reviewed progress over the past 5 years, evaluated both implicit and explicit needs within the goals, and considered which activities are most likely to deliver on these goals. These activities are grouped under the following themes. The link between the following new themes and the current themes is described. Although there is a close relationship between the new and current, the committee believes that the title and listed activities more clearly define what the FRP must do in order to deliver on the goals of the “Strategic Plan”.

Continuous Quality Improvement

As in any business it is always necessary to implement and follow through with procedures to improve critical elements of the business. In this case, the critical element of the FRP is developing and transferring knowledge to policy, planning and operations in order to improve forest sustainability. Thus, this theme incorporates activities associated with the existing “Knowledge Transfer” theme with additional activities such as “Silviculture Effectiveness Monitoring” which is an essential component of advancing forest sustainability.

Uncertainty associated with Sustainability and Guidelines

There are a number of uncertainties associated with new guides and future impacts of climate change. This theme embraces activities directed at resolving/understanding uncertainties linked to existing and new guides (landscape, stand, site) that will be implemented in all plans by 2010. Moreover this theme captures activities that address uncertainties with climate change predictions.

Uncertainty associated with Operational Issues

This theme captures activities that span some of the current themes (Operational Implementation, Fibre Production, and Forest Management Context) and more directly concern forest operation issues associated with planning and certification.

Uncertainties associated with Input Dataset and Modeling Errors in Spatial Analysis

A major source of uncertainty in modeling is accounting and understanding sources of error in models. Although there are a number of current projects examining error in spatial analysis, this theme describes some additional needs that will be addressed over the next 5 years.

The numbers in bold refer to the FRP goals and thus indicate the science activities that will address which FRP goals

Continuous Quality Improvement

- **Tech transfer and extension 1,3, 4, 5**
 - Transfer Template for Each Project
 - Synopsis posted on the web including results
 - Tree Tips tech note to be developed from each project
 - Journal Paper if appropriate
 - Results to be included in transfer workshops
- **Project Outputs Summary List 1,3**
 - A continuous project outputs summary will be maintained
 - The summary of each project will include a brief project description, principle contact, project status, and applicability to planning and operations
- **Obtain feedback to FRP from operations 3,5**
 - Active engagement with operations staff during workshops and/or other opportunities will be used to obtain feedback to evaluate implementation of new knowledge and technology and subsequently improve further development and implementation
- **Silvicultural Effectiveness Monitoring (SEM) 1,2, 4**
 - Validation of meeting yield curve assumptions (forest unit & intensity), and
 - Are post-renewal succession model inputs accurate and realistic?
 - Link to NEBIE, EFP pilots, and provincial SEM and renewal standards initiatives
- **FMP Science Checklist to be used during plan development 1,2,3**
 - Ensure that inventory reflects latest science opportunities
 - Capture past silviculture work and tag with NEBIE designation
 - Apply proper yield curves and link to NEBIE conditions
 - Habitat modeling, ensure approach reflects latest research findings within approved policy
 - Develop SGR's consistent with latest science, enable ex. CT, density management, improved stock, use FVS
 - Socio-economic modeling, first nations, consumptive values, non-consumptive values
 - Monitoring, SEM tied to NEBIE, inventory and plan, info management systems

Uncertainty: Sustainability and Guidelines

- **Impact of guidelines on costs and supply levels 1,2,4**
 - During pilot testing of new guides by Forest Policy Section (MNR) using Patchworks model the impact of guides on costs and supply levels will be evaluated.
- **Future conditions and desired level of management intensity 1,2,4**
 - Comparison of silviculture portfolios (extensive to elite in a TRIAD context) to evaluate long-term sustainable management tradeoffs for ecological, economic, and social benefits.
 - Climate change scenario impacts on future forest composition and habitat

Uncertainty: Operational issues

- **Site-suitability for silvicultural treatments 1,2,4**
 - In order to improve silviculture planning it is necessary to identify the eligibility of polygons for potential NEBIE treatments which will require improved soil mapping
- **FSC compliance 1,2,3**
 - Address uncertainty about impacts of FSC compliance on wood supply, wood costs, operational costs
 - Are there best practices/methods to achieve FSC certification requirements?
- **FMP development 1,2, 3, 4**
 - Identify new/outstanding uncertainties as a result of development of the Romeo Malette and Nipissing forest plans
- **Other Operational Uncertainties**
 - The current hardwood cost reduction project may identify and resolve outstanding uncertainties with operational issues in GLSL

Uncertainty: Input dataset and modeling errors in Spatial Analysis

- Existing silvicultural status 1,2,4
 - Develop improved knowledge/tools for assessing the status of silviculture on individual polygons
- **Validate and improve Growth and Yield models 1,2,4**

A major source of uncertainty in the current yield curves is a lack of reliable site index relationships

- Develop site index equations
- Evaluate benchmark yield curves based on site index equations
- Improve predictions of yield curves using refined models as they become available
- Inventory/measurement error for application of yield curves is another source of uncertainty.

Next Steps and Implementation

Implementation of this science plan will require a tactical evaluation of current projects in relation to the bulleted items listed above. Moreover, new projects will be assessed on the basis of addressing the uncertainties listed above using the following criteria. This evaluation will be a focussed requirement of the Science Advisory Committee.

Criteria for FRP New Project Selection

- Supports FRP goals and priorities
- Addresses planning/operational uncertainties and needs
- Project design, methods and requested resources meet peer review
- Collaborators and partners understand goals of FRP and their project deliverables address FRP needs